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Estimation of Executive Extension Needs of Rural Women in the Field of Rationalizing Food Consumption Using Borich's

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Author's contribution

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Empowering rural women and girls is not only a fundamental need for agricultural development but also one of the most prominent components of social and economic progress and sustainable development in general. Search data gathered through the questionnaire, the interview with 120 properly addressed, after compiling the data are encoded and discharged and scheduling to fit the statistical analysis methods used, and used some appropriate statistical methods as a percentage, arithmetic mean, standard deviation, as well as using frequency tables to display data, use the SPSS program. The variable was measured for the indicative requirements using equation Borich's needs assessment guidelines. The parent survey results that most rural women aged boys with active level by 59.2%, and education level between a medium and illiteracy, for the exposure to mass media level was low by 76.7%. The most of the sources of information were from Mother of husband by 80%. In conclusion the need to utilize the remaining food through several smaller units to take advantage of it to make a new meal, so they must diversify its sources of information and guidance for the purpose of upgrading rural women to benefit from food waste.

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1. INTRODUCTION

Rural women play an *important* role in the areas of family and community development, they are involved in man's farm. In addition, to domestic work women play, they are also mostly responsible for meeting the daily family needs [1]. Further, women play a key role in raising of birds, farm animals and working in micro and small rural industries. These units are involved in value addition and process to produce such as cheese and dairy products and shops to sell them. Given the importance of the role of rural women, there is a need to develop in their performance to the extent that helps to take advantage of all their capabilities. It is to achieve the aims of rural development and with participation of women at large. Therefore, a study need to be taken up in particular family in order to determine the requirements for developing these renderings to increase efficiency and its effectiveness in the rural development process [2].

The organization aims agricultural extension as one community organizations to develop rural society, using many methods and appointed to various methods and tools and guidance in the implementation of its activities and programs, to sensitize the seeking guidance and their surroundings from position conditions [3]. Extension seeks to develop individual, family, community, and because the family is a productive unit in society has placed agricultural extension care, given that women represent at least half the human family unit with Egyptian society, because of their role in the development of the individual Society was to improve the social and economic status through guided recommendations in various areas and especially the rationalization of consumption [4]. Take all the developed and developing countries alike to rationalize consumption because it is an important component of the national economy, rationalizing consumption generally whether food or other-is difficult because it requires a change to many concepts and customs and traditions and methods inherited behavior in society and that requires time and effort to achieve positive results, [5]. The food problem is a problem of national security, especially at a time of crisis, and to achieve the motto of food for all, it is important that we make serious attempts to limit consumption with optimal use of nutrients to make the best possible use and not wasteful use and reduce losses and that everyone in the community has access to necessary quantity of nutritional needs [6]. In addition, increased the importance of rationalizing food consumption in Egyptian society in the recent period. Because of increased population, lack of food resources, high prices of various goods and services and raising public spending, compel maximum utilization of available resources,with lessening of irrational consumption, and also reduce waste as much as possible [4]. Rural women represent an active member and influential role in the process of rationalizing food consumption, given that it has the responsibility for directing the family consumption, in addition to their influence in the formation of consumer habits for her family [7]. The process of determining the indicative requirements associated with rural knowledge in rationalizing food consumption as a basis for preparing the correct extension programs with a view to providing them with proper information and knowledge in this area, which can help to rationalize consumption of food, both maintained damage or reduce waste or increase benefit, thus achieving a good outcome on their families and society as a whole [8].

Therefore, this research studied the operational guidance needs of rural women of Salem County Center Kafr El-Shaikh on rationalizing food consumption, food preparation process involved, and the delivery of food, and the process of dealing with food residue, so drawing conclusions to the planning of future programs aimed at the advancement of rural women in rationalizing food consumption. So take care this research studied the operational guidance needs of rural women of Salem County Center Kafr El-Shaikh on rationalizing food consumption, food preparation process involved, and the delivery of food, and the process of dealing with food residue, so drawing conclusions to the planning of future programmes aimed at the advancement of rural women in rationalizing food consumption.

1.1 Objectives of the Study

Primarily indicative needs recognition of rural Executive in rationalizing food consumption province Kafr El-Sheikh, weight through the following subsidiary objectives:

1. Learn about some of the characteristics of rural women in the study area.

2. To determine the awareness of rural women on the importance of extension recommendations and their application in the field of rationalization of food consumption.
3. To identify the most important information sources for rural women in the field of food consumption.
4. To propose an action plan of extension program for the development of knowledge and skills to rural women in the rationalization of food consumption field in the research area.

2. MATERIALS AND METHODS

2.1 The Procedural Definitions

2.1.1 Rural-rural women

The farmer's wife or that she was possessed by the agricultural cooperative association search area.

2.1.2 Rural extension needs in rationalizing food consumption

It is intended that need to implement the recommendations of indicative rationalizations of food consumption and awareness of its importance and on both: the process of food preparation, and food process, and the process of dealing with the remaining food, this variable was measured using equation Borichs' indicative needs assessment:

MWDS= (I-P)*$\bar{I}$ I = important, I= implementation, $\bar{I}$= mean of important scores

2.2 The Search Area

Selected Kafr el-sheik to conduct this research because of it Faculty of agriculture main researcher job shop, Kafr El Sheikh in the northern part of the Delta Mediterranean Sea northward along 100 km, and the South West Province of Dahlikiah governorate, East, and West. The Rosetta branch along 85 km, and includes Kafr El Sheikh ten administrative centers [9].

2.3 Comprehensive and Sample Search

Sidi Salem Center was chosen at random from among the 10 conservation centers, then randomly selected a village shalma among villages in the center, and from the fact of possession of agricultural cooperative association slips (2 services) in the village been limited number of ladies and wives possess total 804 Lady Comprehensive account search, followed by a systematic random sample selection of them by 15% of the overall total was 120 of respondents (Wahyudi *et al*, 2019).

2.4 Set up Questionnaire

Questionnaire designed to collect field data for research purposes, taking into account in the preparation of the form clearly questions, and included two parts, the first included: a set of questions to identify some characteristics of rural women, and included the second part: A set of questions to measure rural extension recommendations application rationalizing food consumption and knowledge of the importance of those recommendations. An initial test conducted to form the number (20) properly addressed to ensure clarity of the questions.

2.5 Data Collection and Analysis

Search data gathered through the questionnaire, the interview with 120 properly addressed, after compiling the data are encoded and discharged and scheduling to fit the statistical analysis methods used, and used some appropriate statistical methods as a percentage, and average The arithmetic mean, standard deviation, as well as using iterative Tables to display data, use the software SPSS (Statistical Program of Social Sciences version 22) [10].

3. RESULTS AND DISCUSSIONS

3.1 Characteristics of Rural Women

Results in Table 1 show that 13.3% of the respondents were elderly. Therefore, the training opportunities available could be utilized appropriately by them in order to increase their experience, so as to raise their standard of living and economic. 3.3% had large families. 34.2% were illiterate, 5.8% were literate, 60% were educated. 44.2% were her illiterate husbands, 1.7% were her read and writing husbands, 53.1% her educated husband's. 95% of them had full-time for her families. 100% of them said that extension services are not available. 55% of them had moderate livestock holdings. 39.2% of them had low poultry. 63.3% were moderately satisfied with life in the village.

Table 1. Some characteristics of rural women

Variables	N	%	Variables	N	%
1- Age:			**2- Family member:**		
Small (22-35)years	71	59.2	Small (1-2)member	56	46.7
Middle (36-51)years	33	27.5	Middle (3-4) member	60	50.0
High (52-65) years	16	13.3	High (5-6) member	4	3.3
3- Education of women			**4- Education of women wife**		
Illiterate 0 degree	41	34.2	Illiterate 0 degree	53	44.2
Reads and write 3 degree	7	5.8	Reads and write 3 degree	2	1.7
Low (9-10) degree	23	19.2	Low (6-8) degree	4	3.3
Middle (11-14) degree	41	34.2	Middle (9-13) degree	57	47.5
High (15-16) degree	8	6.7	High (14-16) degree	4	3.3
5- Full-time to family			**6- Extension service**		
Free 1 degree	114	95.0	Available 1 degree	0	0.0
Not free 0 degree	6	5.0	Not available 0 degree	120	100.0
7- Animal possession			**8- Poultry possession**		
Small (0.2-1.7) degree	43	35.8	Small (35-10) degree	47	39.2
Middle (1.8-3.4) degree	66	55.0	Middle (11-14) degree	46	38.3
High (3.5-5) degree	11	9.2	High (15-16) degree	27	22.5
9-Percentage of food spending			**10- Satisfaction with village life**		
Low (5-29)%	3	2.5	Low (4-7) degree	12	10.0
Middle (30-55)%	60	50.0	Middle (8-12) degree	76	63.3
High (56-80)%	57	47.5	High (13-16) degree	32	26.7
11- Informal social participation			**12- Number of information sources**		
Low (2-6) degree	8	6.7	Little (2-4) source	40	33.3
Middle (7-13) degree	47	39.2	Middle (5-9) source	76	63.4
High (14-18) degree	65	54.1	High (10-12) source	4	3.3
13- Opinion Leadership			**14- Exposure to mass media**		
Not leadership	12	10.0	Low (2-6) degree	92	76.7
Low (4-7) degree	13	10.8	Middle (7-13) degree	20	16.7
Middle (8-11) degree	43	35.8	High (14-18) degree	8	6.7
High (12-15) degree	52	43.4			
Total	**120**	**100.0**	**Total**	**120**	**100.0**

Source: Questionnaires from the respondents

This generally depends on the family's economic and pension income level, where the more well it is, the more appropriate it will be. An indication that the number of sources was not high, so these villages need to diversify and diversify their sources of information by providing training courses and guidance publications to keep pace with developments in the agricultural field and raise the standard of living [1,10].

In addition, the field of indicative experience was the lack of experience for all respondents and this is an indication of the lack of expansion of the extension work in these villages needs more attention from government institutions as well as other charities that are interested in the development of the countryside in all its aspects 54.1% of them had high informal social participation. 63.4% of them had Mediate number of information sources. 43.4% of them high degree of leadership. An indication that rural women have had a good leadership role in the family and this is the nature of rural women in terms of family raising matters and arranging matters of the house and depends on the development of the family and increasing its potential on rural women where the keener they are for their family thus increasing the income of the family through Saving money, effort, etc [11,12]. Finally, 76.7% of them with low exposure to the media. A sign that most rural women with a low level of education do not meet the ambition to keep pace with scientific developments level access to get proper information about evolution and get the high income and economic level More mass media are needed for the countryside to provide more information to the countryside (Birke, Lemma, & Knierim, 2019).

3.2 The Awareness of Rural Women of the Importance of Extension Recommendations and their Application in the Field of Rationalization of Food Consumption

3.2.1 Self-perceived level of importance and competency in the food preparation process

Rural women constitute a large proportion, energetic, and of humanity. They comprise as farmers and workers in agriculture and horticulture workers and dealers in the market, businesswomen and business pioneers and leaders in the community, more than a quarter of the world's population [13]. Therefore should be to focus on this important category in society towards rural development and sustainable development. The results in Table 2 indicate an analysis of the implementation extension needs of respondents on the basis of the MWDS. The top seven competencies were "wash hands and utensils before preparing food first to prevent food contamination or transmission" (M=2.93), "Place the salt and lemon over the salad immediately before eating to maintain their nutritional value" (M=2.91), "Hands free from bracelets and rings and head covering when preparing food is essential" (M=2.88), "The best peeling is to remove a very thin layer of it" (M=2.81), "Wash the chopped vegetables under water" (M=2.77), "Wash the leafy vegetables as vinegar by separating and washing the paper" (M=2.70), "Boil the milk after you buy it directly" (M=2.63).

The results in Table 2 provide the self-perceived level of competency of respondents on the basis of the MWDS. The top five competencies were "Wash hands and utensils before preparing food first to prevent food contamination or transmission" (M=1.99), "Place the salt and lemon over the salad immediately before eating to maintain their nutritional value" (M=1.98), "Hands free from bracelets and rings and head covering when preparing food is essential" (M=1.96), "The best peeling is to remove a very thin layer of it" (M=1.93), "Wash the leafy vegetables as vinegar by separating and washing the paper" (M=1.69). The number of sources has not been high, so these villages need to diversify and diversify their sources of information by providing training courses and guidance publications to keep abreast of developments in agriculture and to raise the standard of living (Wahyudi et al, 2019).

Gender equality and the empowerment of women and girls are at the center of the 2030 Sustainable Development Plan. In addition to the purposes of Goal 5 of the Sustainable Development Goals on 'Achieving Gender Equality and Empowering Women and Girls', we find this theme repeated in the overall 17 Sustainable Development Goals [14]. The results in Table 3 reveal the six Highest-ranking extension needs of respondents, as determined by the mean weighted discrepancy scores (MWDS): They are: Wash the chopped vegetables under water (3.28), Wash the vegetables before cutting them to maintain their nutritional value (2.80), Cutting vegetables is a large piece of food that keeps its nutritional value (2.60), Leave the frozen meat anywhere in the kitchen to dissolve the ice (2.20), Boil the milk after you buy it directly (2.20), Wash the leafy vegetables as vinegar by separating and washing the paper (2.02). Most areas within a level of Somewhat important for food preparation process form rural women. The fact that most rural women have sufficient expertise in terms of food preparation through their families from parents to grandparents sequence. Where customs and traditions the women learn culinary arts before her marriage in her residence [15,16]. Hinder gender digital divide in rural development. Due to a large number of persons living in rural areas in developing countries, and more precise understanding of getting mobile phones and use them to take advantage of them to communicate with the agricultural circles and thus to lay the foundations for the relevant policy [14].

3.2.2 The respondents self-perceived level of importance and competency in the Food delivery process

The results in Table 4 shows an analysis of the extension needs of respondents on the basis of the MWDS. The top five competencies were "The food is served in an attractive, sweet-smelling way" (M=2.88), "Give someone who needs another amount of food from family members" (M=2.88), "Eliminate foods prepared for a long time" (M=2.80), "Animals like cats and dogs are away from places to eat" (M=2.76), "The food is placed in front of the food" (M=2.72). Moreover, results in Table 4 provide an analysis of the extension needs of respondents on the basis of the MWDS. The top five competencies were "Give someone who needs another amount of food from family members" (M=1.97), "The food is served in an attractive, sweet-smelling way" (M=1.95), "Eliminate foods prepared for a

long time" (M=1.93), "The food is placed in front of the food" (M=1.87), "Animals like cats and dogs are away from places to eat" (M=1.76). Most areas were between score somewhat important and important knowledge semantic level job in food for farm animals and attention [3]. Possible for the information and communication technologies to transform lives and improve livelihoods in agriculture by helping to secure savings and find affordable insurance and risk management, in addition to enhancing access to financial solutions centered through exploitation optimization of resources and food [17] .

Rationalizing food consumption is important for providing food for family members in accordance with their needs and physical and mental exercise, to be spending on food for the family and their resources, capabilities and rational decisions regarding the selection of food and determine quantities and how to set it up and eat it and preservation and storage (Sunetha, 2014). Table 5 results signal that (Bread is definitely cut to reduce the residue.) came in first in terms of irrelevant to the training requirement according to equation Borich's, followed by the second as irrelevant paragraph (Determine the amount of food appropriate for each individual). While paragraph (Eliminate foods prepared for a long time.) first training needs and guiding [18]. A sign that most rural women have the competence to eliminate stomach food for long or utilize them in the field as used for animals, birds, etc [6]. Also, you can review Table 5 to other paragraphs about the need for rural women.

Table 2. Distribution of respondents according to competences implementation and importance in food preparation process

No	The competences	Importance		Competence	
		M	SD	M	SD
1.	Wash hands and utensils before preparing food first to prevent food contamination or transmission	2.93	.32	1.99	.09
2.	The quantities of food that fit only the number of family members.	2.06	.83	1.24	.43
3.	Leave the frozen meat anywhere in the kitchen to dissolve the ice.	2.22	.81	1.12	.32
4.	Wash the vegetables before cutting them to maintain their nutritional value.	2.56	.71	1.16	.37
5.	Cutting vegetables is a large piece of food that keeps its nutritional value.	2.42	.76	1.12	.32
6.	Soak vegetables in water after cutting.	2.36	.79	1.57	.51
7.	Wash the chopped vegetables under water.	2.77	.55	1.13	.33
8.	Place the salt and lemon over the salad immediately before eating to maintain their nutritional value.	2.91	.34	1.98	.16
9.	The best peeling is to remove a very thin layer of it.	2.83	.50	1.93	.29
10.	Soak the rice after washing it in water.	2.12	.810	1.25	.43
11.	Water is used to soak the rice in cooking.	2.07	.81	1.18	.39
12.	Boil the milk after you buy it directly.	2.63	.61	1.53	.50
13.	One knife is used without washing it in slicing meat and vegetables.	2.36	.84	1.56	.50
14.	Wash the leafy vegetables as vinegar by separating and washing the paper.	2.70	.66	1.69	.46
15.	Cut the power on a plastic board.	1.87	.85	1.05	.22
16.	Hands free from bracelets and rings and head covering when preparing food is essential.	2.88	.40	1.96	.20
	Total	39.65	5.19	23.44	1.97

Source: Questionnaires from the respondents

Table 3. MWDS for level of importance and competence to respondents in food preparation process

No	The competences	MWDS	Rank
1.	Wash hands and utensils before preparing food first to prevent food contamination or transmission	1.87	6
2.	The quantities of food that fit only the number of family members.	1.63	9
3.	Leave the frozen meat anywhere in the kitchen to dissolve the ice.	2.20	4
4.	Wash the vegetables before cutting them to maintain their nutritional value.	2.80	2
5.	Cutting vegetables is a large piece of food that keeps its nutritional value.	2.60	3
6.	Soak vegetables in water after cutting.	1.58	13
7.	Wash the chopped vegetables under water.	3.28	1
8.	Place the salt and lemon over the salad immediately before eating to maintain their nutritional value.	1.87	6
9.	The best peeling is to remove a very thin layer of it.	1.80	8
10.	Soak the rice after washing it in water.	1.73	10
11.	Water is used to soak the rice in cooking.	1.77	9
12.	Boil the milk after you buy it directly.	2.20	4
13.	One knife is used without washing it in slicing meat and vegetables.	1.60	12
14.	Wash the leafy vegetables as vinegar by separating and washing the paper.	2.02	5
15.	Cut the power on a plastic board.	1.63	11
16.	Hands free from bracelets and rings and head covering when preparing food is essential.	1.83	7
	Total	32.42	

Note: Scale. 1 not important, 2 Some what important, 3 important. 1 not competence, 2 Somewhat, 3 competence. MWDS= mean weighted discrepancy score.

Table 4. Distribution of respondents according to competences implementation and importance in food delivery process

No	The competences	Importance		Competence	
		M	SD	M	SD
1.	The food is served in an attractive, sweet-smelling way.	2.88	.39	1.95	.22
2.	Determine the amount of food appropriate for each individual.	1.81	.82	1.05	.22
3.	The food is placed in front of the food.	2.72	.60	1.87	.34
4.	Bread is definitely cut to reduce the residue.	2.02	.85	1.13	.34
5.	Animals like cats and dogs are away from places to eat.	2.76	.58	1.76	.45
6.	Give someone who needs another amount of food from family members.	2.88	.38	1.97	.26
7.	Eliminate foods prepared for a long time.	2.80	.50	1.93	.26
	Total	17.86	2.62	11.65	1.07

Source: Questionnaires from the respondents.

Table 5. MWDS for level of importance and competence to respondents in food delivery process

No	The competences	MWDS	Rank
1.	The food is served in an attractive, sweet-smelling way.	1.87	2
2.	Determine the amount of food appropriate for each individual.	1.52	7
3.	The food is placed in front of the food.	1.70	6
4.	Bread is definitely cut to reduce the residue.	1.77	4
5.	Animals like cats and dogs are away from places to eat.	2.00	1
6.	Give someone who needs another amount of food from family members.	1.82	3
7.	Eliminate foods prepared for a long time.	1.75	5
	Total	12.42	

Note: Scale. 1 not important, 2 Somewhat important, 3 important. 1 not competence, 2 Somewhat, 3 competence. MWDS= mean weighted discrepancy score

3.2.3 The respondents self-perceived level of importance and competency in the dealing process with remaining food

The results Table 6 remaining food handling process that was efficient (Dispose of remaining food for poultry and domestic poultry). While the most important paragraph is any surplus food is excluded and left for a long time and placed for domestic birds and poultry). The rest of the paragraphs could be seen as important in dealing with the remaining food and utilized according to the quality of the remaining food. The paragraph was the least important from the point of view of rural women's, (The food that remains in the work of new and useful varieties). The least efficient paragraph was (Heat the food after extraction from the refrigerator at the same temperature cook), a sign of understanding and awareness of women alright that is heating the food stored in the refrigerator to produce the same tastes or asymptotic him when you cook them [7].

Table 7 results signal about the level of importance and efficiency in the process of dealing with the remaining food to the highest level (Heating cooling and food more than once it reduces its nutritional value), while the last place in terms of efficiency (The remaining food is divided into units) Indication, the ability of rural women to divide the remaining food according to its plant or animal quality and thus enable it to make the best use of these remaining foods. Table 7 can be viewed to see the rest of the paragraphs according to the efficiency in dealing with the remaining foods [7,17].

Rural women face 3D gap: gender, rural and digital. Examining these challenges faced by rural communities to full and fair access to information and communication technologies. Table 8 results showed that most of the information sources of rural women or her husband where he was 80%, followed by 69.2% rate the wife's mother then came through personal experience by 63.3% and it came in succession by her husband through the son and from television and radio after consecutive rate 45.8%, 40.8%, 34.2%, 15%. The last place was through agriculture agents 1.7% indication that agriculture extensionists and other very weak role were also the significant weakness of this relationship between agricultural workers and rural women and thus lack of confidence between them and the inability of workers to transfer knowledge and information to rural women [19,20]. Therefore, contribution to the personal characteristics of rural women to improve rural families ' food style as responsible for the identification and selection of food and keeping the essence of this style as knowledge and awareness searched food [18].

3.3 Proposal an Action Plan of Extension Program for the Development of Knowledge and Skills to Rural Women in the Rationalization of Food Consumption Field in the Research Area

This section deals with the Proposal a action plan of extension program for the development of knowledge and skills to rural women in the rationalization of food consumption field in the research area. The focus will be on identifying problems, determining the extension objectives and developing the work plan as follows:

Table 6. Distribution of respondents according to competences implementation and importance in the dealing process with remaining food

No	The competences	Importance		Competence	
		M	SD	M	SD
1	The remaining food is divided into units.	2.05	.82	1.38	.49
2	The food that remains in the work of new and useful varieties.	2.01	.84	1.27	.44
3	Dispose of remaining food for poultry and domestic poultry.	2.80	.48	1.98	.18
4	Wash hands after and before handling the remaining.	2.81	.47	1.95	.22
5	Any surplus food is excluded and left for a long time and placed for domestic birds and poultry.	2.81	.49	1.95	.25
6	Heat the food after extraction from the refrigerator at the same temperature cook.	2.21	.87	1.08	.31
7	Heating food and cooling it more than once reduces its nutritional value.	2.60	.73	1.20	.40
	Total	17.28	2.90	10.82	1.25

Source: Questionnaires from the respondents

Table 7. MWDS for level of importance and competence to respondents in in the dealing process with remaining food

No.	The competences	MWDS	Rank
1.	The remaining food is divided into units.	1.33	6
2.	The food that remains in the work of new and useful varieties.	1.48	5
3.	Dispose of remaining food for poultry and domestic poultry.	1.63	4
4.	Wash hands after and before handling the remaining.	1.72	3
5.	Any surplus food is excluded and left for a long time and placed for domestic poultry.	1.72	3
6.	Heat the food after extraction from the refrigerator at the same temperature cook.	2.25	2
7.	Heating food and cooling it more than once reduces its nutritional value.	2.80	1
	Total	12.93	

Note: Scale. 1 not important, 2 Somewhat important, 3 important. 1 not competence, 2 Somewhat, 3 competence. MWDS= mean weighted discrepancy score

Table 8. The Information resources for rural women

No.	Information resources	N	%
1.	Mother of husband	96	80.0
2.	Mother	83	69.2
3.	Personal experience	76	63.3
4.	Husband	55	45.8
5.	Sons	49	40.8
6.	Television	41	34.2
7.	Radio	18	15.0
8.	Agricultural Agent	2	1.7

n= 120 respondents

3.3.1 Defining extension needs for the respondents in the research area

The sub-problems were the knowledge and applied extension needs for respondents in three from the food rationalization consumption processes

1) Food preparation process

1- 94.8% of the respondents don't know about the recommendation not wash the cutting vegetables under water directed to them.
2- 92.5% of the respondents don't know the recommendation to wash the vegetables before cutting them directly to maintain their nutritional value.
3- 92.1% of the respondents don't know the recommendation of the need to cut vegetables large pieces to preserve their nutritional value.
4- 89.7% of the respondents don't implement the recommendation not to leave the frozen meat anywhere in the kitchen, but left in the refrigerator to dissolve the snow.
5- 86.9% of the respondents don't know about the recommendation to boil milk after a direct purchase.
6- 81.3% of respondents did not know the recommendation that salt and lemon should be put in place before eating directly to preserve their nutritional value.
7- 79.6% of the respondents do not implement a recommendation without hands of bracelets and rings and cover the head when preparing food.
8- 78.8% of the respondents did not know the best potato peeling recommendation is to remove a very thin layer of them.
9- 77.4% of respondents did not implement the recommendation to use rice water to soak in cooking.

2) Food delivery process

A - 91.4% of the respondents did not know the recommendation that animals such as cats and dogs should be removed from eating places.
B - 88.7% of the respondents do not implement the recommendation to provide

Table 9a. Plan of action for an extension program to educate rural women in the field of rationalizing food consumption in Kafr El Sheikh governorate

Educational extension objectives	Change	Learner	People	Time	Place	Extension method
1- Defining of the respondents the importance of non-washing of cutting vegetables under water directed to them through the Extension meetings.	Knowledge	- Home economics professors. - Professors from the Faculty of Agriculture -Researchers at the Food Processing Unit at Sakha station. - Doctor of Health Unit. -Nutrition Specialist. -Directorate of Agriculture. - Rural Development Specialist. -Local leaders for rural women	Rural women in the village	During a month	Hall in health unit	Extension meetings
2- Defining of the respondents the importance to wash the vegetables before cutting them directly to maintain their nutritional value through the Extension meetings.	Knowledge				Hall in the extension center	Extension meetings
3- Defining of the respondents the importance of vegetable cutting large pieces to maintain their nutritional value through the Extension meetings.	Knowledge				Hall in the extension center	Extension meetings
4- Develop the skill of the respondents about not leaving the frozen meat anywhere in the kitchen, but leave the refrigerator to dissolve the snow from it and through home visits.	skill				House of respondents	Home visits
5- Defining of the respondents the importance of to boil milk after a direct purchase through the extension meetings.	Knowledge				Hall in the extension center	Extension meetings
6- Defining of the respondents importance of the salt and lemon should be put on salad before eating directly to preserve their nutritional value through the extension meetings.	Knowledge				Hall in the extension center	Extension meetings
7- Develop the skill of the respondents about hands of bracelets and rings and cover the head when preparing food through home visits	Skill				House of respondents	Home visits
8- Defining the importance of the best potato peeling recommendation is to remove a very thin layer of them through the extension meetings	Knowledge				Hall in health unit	Extension meetings
9- Developing skill of the respondents use rice water to soak in cooking through home visits	Skill				House of respondents	Home visits

Table 9b. Plan of action for an extension program to educate rural women in the field of rationalizing food consumption in Kafr El Sheikh governorate

Educational extension objectives	Change	Learner	People	Time	Place	Extension method
1- Defining of the respondents the importance of that animals such as cats and dogs should be removed from eating places through the extension meetings.	Knowledge				Hall in the extension center	Extension meetings
2- Developing skill of the respondents provide food attractive appearance smell pleasant to accept the individual through home visits.	Skill				House of respondents	Home visits
3- Defining of the respondents the importance of that giving the needy family members another amount of food through the extension meetings.	Knowledge				Hall in the extension center	Extension meetings
4- Developing skill of the respondents about cut the bread is definitely suitable for reducing the remaining through home visits.	Skill				House of respondents	Home visits
5- Defining of the respondents the importance of that excluding foods that have been prepared for a long time through the extension meetings.	Knowledge				Hall in the extension center	Extension meetings

Table 9c. Plan of action for an extension program to educate rural women in the field of rationalizing food consumption in Kafr El Sheikh governorate

Educational extension objectives	Change	Learner	People	Time	Place	Extension method
1- The definition of the respondents the importance of heating food and cooling more than once reduces its nutritional value through the extension meetings.	Knowledge				Hall in the extension center	Extension meetings
2- Developing the skill of the respondents about heating the food after extraction from the refrigerator at the same temperature of cooking through home visits.	Skill				House of respondents	Home visits
3- Developing the skill of the respondents about the hand washing recommendation after and before dealing with the remainder through home visits.	Skill				House of respondents	Home visits
4- Definition of the respondents the importance to exclude any surplus and long-term food and put it to poultry through the extension meetings.	Knowledge				Hall in the extension center	Extension meetings

food attractive appearance smell pleasant to accept the individual

C - 88.1% of the respondents did not know the recommendation of the importance of giving the needy family members another amount of food.

D - 87.7% of the respondents did not implement the recommendation to cut the bread is definitely suitable for reducing the remaining.

E- 82.1% of respondents did not know the recommendation of the importance of excluding foods that have been prepared for a long time.

3) Process of dealing with residual food

A - 81.7% of respondents did not know the recommendation to heating food and cooling more than once reduces its nutritional value.

B - 74.8% of the respondents did not implement the recommendation to heat the food after extraction from the refrigerator at the same temperature of cooking.

C - 72.2% of respondents did not implement the hand washing recommendation after and before dealing with the remainder.

D - 61.6% of the respondents did not know of the recommendation to exclude any surplus and long-term food and put it to poultry.

3.4 Proposal an Action Plan of Extension Program for the Development of Knowledge and Skills to Rural Women in the Rationalization of Food Consumption Field in the Research Area. Work Plan to an Extension Program for the Respondents in the Research Area

That's why we suggest a plan of action in Table 9-a, 9-b, 9-c for accessory to educate rural women in rationalizing food consumption in Kafr El Sheikh for developing rural women in the field of rationalizing food consumption that areas of work. These plans can be implemented in the following three tables for the purpose of developing the knowledge, skills and efficiency of rural women within the areas listed in tables to achieve that objectives.

4. CONCLUSION

Women contribute a significant contribution in the rural economy in the whole world. Their role is different in different regions, but in all cases, their access to resources and opportunities less than men. The achievement of gender equality and women's empowerment in agriculture is central in the work of agricultural extension services. The study showed significant requirement of information and efficiency of rural women in preserving food waste and utilized as recycled using this generation waste compost is beneficial to soil and vegetation that the winner was a weak level.

Rural women need more training and diversify sources of information to be useful. Respondents had to understand the division of the remaining food to units for the purpose of taking advantage of it to make other useful meal of it.

Meanwhile, the results of the study showed thatweakening of rolein agricultural extension for the transfer of knowledge and information. where it was ranked last in terms of sources of information on rural women. Should be activate the role of agricultural extension in these villages and implement more outreach programs, seminars and training courses to develop the skills, knowledge, and information to rural women. Strongly emphasized the importance of the human element-properties-quality characteristics of rural women, their education and the development of consciousness and its controls keys can be used to improve the dietary patterns of the rural family to ensure food safety and food conservation. As well as the need to hold a series of seminars and television and radio programs targeting rural women to raise awareness of the importance of improving food style and not to waste through agricultural extension services to help agricultural colleges to identify all problems and constraints.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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